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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BALLARD, KIMBERLY	

ART UNIT	PAPER NUMBER
1649	

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01/05/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/602,823	LACHARRIERE ET AL.	
	Examiner	Art Unit	
	Kimberly Ballard	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38-52,64-67,70-77 and 80-95* is/are pending in the application.

4a) Of the above claim(s) *39,40,45,46 and 64-67* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38,41-44,47-52,70-77 and 80-95* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Application, Amendments, and/or Claims

1. Claims 38, 41, 43, 47 and 52 have been amended, and claims 37, 68, 69, 78 and 79 have been canceled as requested in the amendment filed October 29, 2010. Following the amendment, claims 38-52, 64-67, 70-77 and 80-95 are pending in the instant application.

2. Claims 39, 40, 45, 46, and 64-67 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on July 17, 2006.

3. Claims **38, 41-44, 47-52, 70-77**, and **80-95** are under examination in the current office action.

4. Any objection or rejection of record pertaining to claims 37, 68, 69, 78 or 79 is rendered moot on account of these claims having been canceled by Applicant.

Maintained Rejections

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 38, 41-44, 47-52, 70-77, 80 and 82-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,241,993 B1 to Breton et al. (issued June 5, 2001) in view of Robinson & Perkins (*Contact Dermatitis*, 2001; 45:205-213), and Trevisani et al. (*Nat Neurosci*. 2002 Jun; 5(6):546-551; Epub: 05/07/2002). This rejection is maintained for reasons of record and as discussed below.

7. Claim 81 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,241,993 B1 to Breton et al. (issued June 5, 2001) in view of Robinson & Perkins

(*Contact Dermatitis*, 2001; 45:205-213), and Trevisani et al. (*Nat Neurosci*. 2002 Jun; 5(6):546-551; Epub: 05/07/2002) as applied to claims 37, 38, 41-44, 47-54, 68-80 and 82-95 above, and further in view of Seidenari et al. (*Contact Dermatitis*, 1998; 38(6):311-315; abstract only). The rejection is maintained fore reasons of record and as discussed below.

Response to Arguments

8. The basis of the above rejections has been presented previously, and will not be reiterated here. Because the core of both of the above rejections pertains to the Breton, Robinson and Trevisani references, Applicants have traversed both of these rejections together. Accordingly, responses to Applicants' arguments will be addressed together.

9. In the response filed October 29, 2010, Applicants submit that one objective of the present invention is to further increase the diversity of models and devices available for evaluating the skin sensitivity of an individual, wherein the specification demonstrates the importance of the presently recited concentrations of peripheral nervous system stimulant in evaluating the level of skin neurosensitivity. The recited concentration is critical, Applicants assert, because using more concentrated solutions may lead to false positive results. In contrast to the method of Breton, Applicants allege that the presently recited method is shorter to implement, can be performed by a consumer versus an experimental technician, and is totally painless.

At p. 15 of the response, Applicants argue that Trevisani et al. administer capsaicin or alcohol by a means that is totally different from the topical application

presently claimed, and the amount of capsaicin used by Trevisani is 1000 times higher than the highest amount in the presently claimed range. Therefore, Applicants assert that one of ordinary skill in the art would not have had an apparent reason to combine Breton and Trevisani in the manner proposed in the office action. Applicants further argue that the concentration of capsaicin used by Trevisani in the *in vitro* studies cannot be automatically extrapolated to a topical use on a skin area of an adult individual, because it would not be possible to assess whether or not the amounts are painful or painless and what are the thresholds of detection. Applicants allege that the claimed invention employs a precise range of capsaicin amounts which allows gradation of individuals in terms of skin sensitivity, and therefore, the range of capsaicin amounts for use is not obvious to determine.

With respect to the Robinson et al. reference, Applicants argue at pp. 17-19 that Robinson's method differs from the presently claimed method in terms of purpose, capsaicin concentration, and means of evaluation. In particular, Applicants allege that Robinson does not teach or suggest the unexpected results achievable by using capsaicin solutions with concentrations between 1×10^{-6}% and 5×10^{-4}% by weight. In terms of the correlation between self-perceived reactivity and actual measured chemosensory responses, Applicants note that while the method by Robinson may allow for division of the tested population into two groups, it does not allow for precise gradation of subjects according to their skin neurosensitivity. Coupled with the noted considerable variability between individual subjects when testing with capsaicin, Applicants argue that the Robinson reference would have taught away from using

capsaicin to elaborate a method to classify a particular population, e.g., concerned with sensitive skin. Lastly, Applicants assert that the scale used by Robinson to evaluate intensity of a sensation differs from the current invention, which obtains information regarding skin reactivity or sensitivity of the individual as a function of specific unattractive sensations.

And regarding the Seidenari et al. reference, Applicants note that because none of the Robinson, Trevisani or Seidenari references recitify the noted deficiencies of Breton, the combination of Breton, Robinson, Trevisani and Seidenari would not result in the claimed subject matter.

10. Applicants arguments have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the claimed method is a simple, quick and painless method) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Furthermore, contrary to Applicants' assertions, the level of ordinary skill in the pertinent art would be at least that of an experimental technician or researcher, not of a layperson consumer, because of the skill and knowledge necessary to understand preparation of formulations comprising skin irritants (as well as the reasoning behind why such irritants are used), and interpretation of experimental results. Consumers may be one group to which a fully detailed kit for

implementing the current evaluation method may be marketed, but it is the technician/clinician who understands the principles behind the method and produce such a kit (and troubleshoot when necessary) who would be considered the person of ordinary skill in the relevant art.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In the instant case, Breton highlights the need for a test to determine whether or not an individual has sensitive skin. Breton teaches that individuals having sensitive skin can be identified by skin sensitivity testing using capsaicin application to the skin, and also that sensitive skin irritation is associated with the release of neuropeptides such as bradykinin, substance P, and CGRP. The teachings of Robinson demonstrate practical procedures for assessing skin reactivity to various stimuli, including capsaicin, in an ethanol solution. And Trevisani teaches that ethanol solutions can potentiate capsaicin-induced responses at vanilloid receptor-1 (VR1; the receptor that mediates capsaicin effects), such as the release of substance P or CGRP.

It is noted that the evaluation method steps taught by Robinson and those of the currently recited invention differ only with respect to the concentration of capsaicin used. In trying to fulfill the need highlighted by Breton for a test for determining skin sensitivity, the ordinary skilled artisan (i.e., a clinician) would have recognized the need to use very low concentrations of capsaicin to: 1) as Applicant mentioned, reduce the incidence of

false positives, and 2) increase the precision and reliability of the test. Therefore, one of ordinary skill in the art would have found it obvious to use concentrations of capsaicin lower than those given in Robinson. And even though many of the studies by Trevisani were performed *in vitro*, the ordinary skilled artisan would have still understood the take-home message from these investigations: capsaicin responses at the vanilloid receptor-1 (VR1) are potentiated in the presence of ethanol. The artisan would have known that regardless of the location of VR1 – be it skin, esophagus or spinal cord – capsaicin activation of VR1 is still mediated in the same manner. Responses of receptors characterized *in vitro* using cells expressing VR1 would be expected to behave the same as receptors in the skin, i.e., their response to capsaicin is potentiated in the presence of ethanol. Therefore, because of the potentiating effect of ethanol, the ordinary skilled artisan would have been motivated to use a lower concentration range of capsaicin in an alcohol solution for skin sensitivity testing.

Contrary to Applicants' assertions, there is nothing particularly unique or unexpected with respect to the results presented in the instant specification or the post-filing art by Jourdain et al. (*J Cosmet Sci.* 2005; 56:153-156), for which one of the current inventors is an author. A test was given to a group of women to determine their skin sensitivity, and based upon their first detection of increasing concentrations of an irritant applied to the skin, they were ranked according to an arbitrary scale of neurosensitivity. However, clinicians routinely classify subjective ratings based upon graded scales or ranges (i.e., a scale of 1 to 10, a range of scores from very low to very high, etc.) Routine also are dose response curves in the area of pharmacology to test

for toxicity or for particular effects. The idea of graduated scales is therefore not new or non-obvious, because such scales are often desired in the relevant art as a means to quantify subjective data to allow for more efficient analysis and easier comparison of data between different studies and/or research groups. Accordingly, the invention as a whole is obvious in view of the combined teachings of Breton, Robinson and Trevisani.

Finally, with respect to the Seidenari et al. reference, as noted previously, Seidenari was presented merely to evidence that along with the forearm and cheek, the nasolabial fold (wing of the nose) is an art-acknowledged skin area commonly used for sensitivity testing. The ordinary skilled artisan would therefore have recognized that the wing of the nose could also be used for assessment of capsaicinoid sensitivity according to the presently recited method. Therefore, the rejections of claims 38, 41-44, 47-52, 70-77 and 80-95 are maintained.

New Objections, Necessitated by Amendment

Claim Objections

11. Claim 41 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As amended, claim 41 now depends from claim 70. Claim 70 recites the concentration range of 1×10^{-6} to 1×10^{-4}, and dependent claim 41 recites that this range is 5×10^{-5} to 5×10^{-4}, wherein the upper limit of this range, 5×10^{-4}, is outside the upper limit of the range recited in claim 70 and

therefore improperly broadens scope of the claimed subject matter. Appropriate correction is required.

Conclusion

12. No claims are allowed.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Advisory Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Ballard whose telephone number is 571-272-2150. The examiner can normally be reached on Monday-Friday 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Stucker can be reached on 571-272-0911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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